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September 20, 2013

Via PDF (Moody.jonathan@EPA.gov)
Confirmation First Class Mail

U.S. Environmental Protection Agency
Attention: Jonathan Moody
Water Enforcement & Compliance Assurance Branch
Water Division, WC-15J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Re: **Eagle Mine, LLC's ("Eagle") Response to Clean Water Act §308(a) Request For Information**
Docket No. V-W-13-308-17

Dear Mr. Moody:

This letter is submitted in response to Region 5 U.S. EPA's Clean Water Act (CWA) §308(a) Information Request dated July 2, 2013 (Request). More specifically, this letter responds to Item 1 and Items 5-8 of the Request, in accordance with the extended response deadline set forth in electronic correspondence from EPA Region 5 Assistant Regional Counsel Nicole Cantello to Eagle's counsel, Dennis J. Donohue, dated July 25, 2013. This letter also responds to Ms. Cantello's September 3rd supplemental request for information on water elevation levels in the Humboldt Tailings Disposal Facility (HTDF).

Before turning to these Items, there are three preliminary matters Eagle would like to address.

1. *Prior Submittals Incorporated by Reference.* Eagle has already submitted information to EPA that is responsive to and/or related to the Request. Therefore, the information is incorporated into this letter by reference, which includes:

    - July 29, 2013, correspondence from Kristen Mariuzza to Jonathan Moody (responding to Item 2 of the Request).

    - August 16, 2013, electronic correspondence and attachments from Dennis J. Donohue to Nicole Cantello. The data and information included with this correspondence is responsive to Item 9 of the Request.

- August 21, 2013, electronic correspondence and attachments from Allen Reilly to Jonathan Moody. The information provided in this transmission responds to Items 3 and 4 of the Request.

- August 22, 2013, electronic correspondence and attachments from Dennis J. Donohue to Nicole Cantello, supplementing Mr. Donohue's August 16 electronic correspondence and including, among other things, the results of radio nuclide sampling responding to Item 9 of the Request.

- August 30, 2013, electronic correspondence and attachments from Kristen Mariuzza to Jonathan Moody, responding to Item 10 of the Request (Eagle's first monthly discharge report).

- September 6, 2013, electronic correspondence and attachments from Kristen Mariuzza to Jonathan Moody clarifying the August 30 submission.

2. *Request Covers Periods Predating Eagle's Ownership and Operation of the HTDF.* As clarified during our August 14 meeting with EPA, Eagle did not take ownership of the HTDF until June 2011. Therefore, Eagle's tenure over the HTDF – which you confirmed is the focus of the Request during our meeting – dates back a little over two years. Consequently, Eagle is in possession or control of only very limited information concerning the HTDF for periods preceding July 2, 2013. This information primarily consists of the information contained in Eagle's Mining Permit Application (MPA) and related documents, as well as certain Michigan Department of Environmental Quality (MDEQ) sampling results that, based on our August 14th meeting, we understand EPA already has.

3. *Evaluate Information in Context.* Third, the information provided in response to the Request must be evaluated in context. Until Eagle's involvement, both the mill and the HTDF had essentially been abandoned for decades by prior owners, leaving unaddressed legacy contamination at the mill site and unattended discharges from the HTDF. Eagle is making a substantial investment to refurbish the mill site and the HTDF. This investment will result in extensive environmental improvements to both the mill and HTDF and bring them under comprehensive environmental permitting programs (including financially-assured reclamation) guaranteeing that these improvements are maintained over the long term. (Eagle presented much of this contextual information to EPA during the August 14 meeting. A hard copy Eagle's Power Point presentation was included with Dennis J. Donohue's August 16, 2013, electronic correspondence to Ms. Cantello.) Therefore, while Eagle can certainly appreciate EPA's need to gain a thorough understanding of the current and planned activities at the mill and HTDF through issuance of the Request, it is not clear what additional benefits will be obtained through further agency actions at the site.

Eagle now responds to Items 1 and 5-8 of the Request as follows:

1. **For each person consulted in preparing your responses to these Requests for Information, provide the full name and title, name of the individual's employer, and business telephone number.**

Response:

Name	Title	Employer	Phone
Allen Reilly	Director, Environmental Risk Management Services	Horizon Environmental Corporation	616-554-3210
Christopher Miron, P.E.	Director, Engineering	Horizon Environmental Corporation	616-554-3210
Robert Newberger	Senior Regulatory Compliance Specialist	Horizon Environmental Corporation	616-554-3210
Dennis Donohue	Partner	Warner, Norcross, and Judd LLP	616-752-2192
Kristen Mariuzza, P.E.	Environmental & Permitting Manager	Eagle Mine	906-339-7075
Jennifer Nutini	Environmental Engineer	Eagle Mine	906-339-7029
Jim French	Director, HSE	Eagle Mine	906-339-7031
Dave Tornberg	Environmental Field Technician	Eagle Mine	906-339-7022
Lance Lindberg	Project Scientist	AECOM	906-226-4980
Anthony Parkinson	Environmental Technician	AECOM	906-226-4976
Carl Garbarino	Project Manager	Fluor	906-235-8204

5. **Provide a copy of a line drawing showing generally the route taken by water in the KEMC facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and storm water run-off. Include a water balance showing average flows. Show all significant losses of water to products, atmosphere, and discharge. Actual measurements should be used whenever available.**

Response:

A line drawing addressing this request is enclosed, along with water balance information. The drawing and balance are, as we discussed at our August 14 meeting, focused on the

HTDF. For clarification purposes, Eagle notes that this Request appears to be tied to the misconception that there are active ore processing operations at the mill, and that the HTDF is contributing wastewaters to waters of the United States. However, as we indicated in our meeting, ore processing will not begin until late 2014. Currently, the mill is a construction site, with wastewater consisting of wet-weather runoff and excavation dewatering water. The existing HTDF receives precipitation and some groundwater. Eagle has not and will not discharge tails to the HTDF until the mill begins operations in 2014.

As explained in our August 21, 2013, response to Request Items 3 and 4, discharges from the mill and HTDF are currently regulated under construction storm water permit- by- rule (NOC No. MIR111712) (addressing runoff from the mill site) and General Storm Water Permit MIS210000 (COC No. 210034) (authorizing discharges of storm water and uncontaminated groundwater collected in and discharged from the HTDF). Thus, there is no wastewater being discharged to waters of the United States from process and production areas, cooling water or sanitary flows.[1]

The water balance is based on the annual average flow values included in Eagle's Mine Permit Application (MPA), with recent adjustments to include an estimate of runoff from a portion of the mill site that is routed to the HTDF by a storm sewer. The actual discharge rate from the HTDF could not be measured prior to construction of the cutoff wall in late 2012/early 2013 because the discharge was groundwater flow only. Therefore, the discharge rate from the HTDF that is included in the water balance is a calculated value based on the sum of all calculated inflows (e.g. average annual rainfall/snowmelt, watershed acreage, and estimated groundwater inflow).

Due to weather variability and uncertainty in the original groundwater estimates, Eagle cannot be certain that the actual discharge rates measured during pumping from the HTDF will always correspond well to the calculated discharge value in the water balance. Discharge rates may be higher during periods of wet weather to ensure proper maintenance of the water balance.

An example of the difference between the calculated average values in the water balance and Eagle's actual discharge rate can be seen in 2013. Due to the partial construction of the subsurface cut-off wall in the fall of 2012 and it effectiveness at retaining water in the HTDF, Eagle needed to temporarily pump water out of the HTDF at a higher than anticipated rate to maintain the historic water level. It is expected that situation may occur during the snowmelt season each year. However, with the cut-off wall eliminating groundwater flow, future discharge rate data will provide improved accuracy in the water balance.

6. Provide a copy of a map identifying the features listed below. Provide copies of Geographical Information System ("GIS") data if available.

a. General topographic features (roads, railroads, buildings, dams, etc.).

[1] Sanitary wastewaters from offices at the mill site are discharged to a septic system.

b. Elevation contours.

c. Waterways and wetlands.

d. Extent of the HTDF.

e. All locations where water is discharged from the HTDF (pumps, decants, seeps, etc.).

f. All locations where water samples are taken (storm water, wastewater, groundwater, etc.).

g. Storm water conveyance structures (culverts, ditches, swales, etc.).

h. Extent of product, byproduct, or waste product piles or storage.

Response:

The requested map is enclosed, depicting the specified features located on Eagle's mill site and HTDF. Importantly, the map reflects features as of the date Eagle prepared the map. This is an active construction site, and property features are changing on an on-going basis. Certain features (and aspects of these features) are expected to change between now and the time processing operations begin.

With respect to "product, byproduct or waste piles or storage" at the mill site and HTDF, Eagle notes again that it is currently in a construction phase: Eagle has not generated any product or waste product and is, therefore, not managing or staging any such material in piles or storage areas at the mill site or HTDF. The geology and exploration department utilizes the existing mill services building. The exploration drill core that is logged and stored inside is the only by-product of Eagle's current operation.

As we discussed during our August 14th meeting, the HTDF is a former open pit iron mine and iron mining and/or beneficiation operations have occurred on the mill site and HTDF intermittently for over 100 years. Residuals from historical mining operations are present in site soils at various locations on our or near these properties, and there are tails from historic mill operations in the HTDF. Eagle's redevelopment activities have already significantly reduced the potential for exposure to these residuals to result in any runoff or other discharges to waters of the United States in excess of any applicable water quality criteria. When complete, the environmental improvements planned for the site (including a waste water treatment plant) will further reduce the potential for any such discharges.

7. **Identify all discharges of water from the HTDF for the previous five-year period immediately preceding the date on which you received this Information Request. Include the location, duration, volume, peak and average flow rates and receiving water of the discharge. Discharges may be from pumps, decants, seeps or other locations where wastewater is released from the HTDF. State whether the discharge water has been in contact with any equipment, finished product, byproduct, or waste product, and provide a list of all potential chemical and biological pollutants contained in those products.**

Response:

As noted above, Eagle took ownership of the HTDF in June of 2011, and has limited additional information on the characteristics and volume of the discharge from the HTDF prior to that date. As we discussed during our August 14th meeting, MDEQ regulated these discharges under an individual NPDES permit (issued to Callahan Mining Company) when there was active milling operations going on, but regulated these discharges under a storm water permit when operations ceased and Callahan closed the HTDF. Through review of MDEQ files, Eagle has determined that MDEQ sampled the HTDF discharge periodically from the late 1980s until the early 2000s to confirm, prior to deactivating the individual NPDES permit, that water discharged from the HTDF met applicable standards and reflected excess precipitation flowing out of the HTDF. We understand that EPA has this information but we can provide it upon request.

MDEQ has continued this regulatory approach since Eagle took ownership of the HTDF, regulating HTDF discharges as storm water until Eagle begins process operations, at which point the individual NPDES permit issued for the HTDF will control. (EPA did not object to or address the regulation of the HTDF discharges prior to the start of process operations in its January 5, 2010, comments on Eagle's individual NPDES Permit No. MI0058649.)

Prior to Eagle's construction of a subsurface cutoff wall, water from the HTDF continuously moved through alluvial soils on the north end of the HTDF to the wetland EE, a condition that, we understand, existed for decades prior to Eagle's purchase of HTDF. A seasonal surface water seep also existed at the northern end of the HTDF. As noted above, Eagle has limited information about these historic discharges, with no information on the peak and average flow rates prior to Eagle's initiation of storm water pumping operations, other than what is suggested from past NPDES permits issued to Callahan Mining Company, a prior owner. (Callahan's NPDES permits authorized a maximum discharge rate of 1.5 MGD.) Eagle believes the historic average flow rates over time would have generally conformed to the calculated discharge provided in the enclosed water balance.

The current HTDF discharge location (to wetland EE) is depicted on the map enclosed in response to Item 6 above. The discharge currently occurs via pumps and above-ground discharge piping, with a peak flow rate in the period from April 22 through August 31, 2013, of 2,160,000 gallons per day and an average flow rate in the same period of 989,000 gallons per day. A summary of flow rate information for this discharge, from inception of the discharge on April 22, 2013, through August 31, 2013, is provided in Table 1. The volume of the discharge should decrease throughout the remainder of this year due to the water elevations being returned to normal after the spring melt. However, this discharge will continue on an "as needed" basis until operations commence. At that time, the wastewater treatment plant, which will be located next to the HTDF, will be operating to treat and discharge the process water via a pipe to Wetland EE.

Eagle does not believe any of the water discharged from the HTDF is in contact with any pollutants associated with the existing tails at the bottom of the HTDF, because those tails are geochemically isolated at depth from the waters in the upper levels of the HTDF. This conclusion is supported by extensive studies of the HTDF contained in Volume II I of

Appendix I (3 of 4) to the Environmental Impact Assessment (EIA), which is Volume II of Eagle's MPA, as well as the results of repeated sampling of the discharge by Eagle and the MDEQ. Chemical isolation of the submerged tails has also been independently verified by MDEQ through review by third party experts in this area. Volume II I of Appendix I to the MPA is enclosed.

Runoff and groundwater inputs into the HTDF (and eventually discharged from the HTDF) may have come into contact with soils at the mill site and adjacent to the HTDF that have been impacted by past operations, but not in amounts that discernibly impact the quality of the HTDF discharge. A list of pollutants that are documented to be present in site soils and/or groundwater and therefore may have "contacted" the discharge water is attached (Table 2).

Information on the nature and volume of the storm water discharge from the HTDF during Eagle's ownership of the property is summarized in the enclosed Table 1. Some of these data have been previously provided to EPA in response to Request items 9 and 10. Eagle will continue to provide records of storm water discharge in accordance with the monitoring and reporting requirements delineated in Item 10, as subsequently modified by Nicole Cantello in her electronic correspondence to Dennis J. Donohue dated August 23 and September 3, 2013.

8. For the previous five-year period immediately preceding the date on which you received this Information Request, provide copies of sample analysis for all water discharges from the HTDF.

Response:

See above and Eagle's August 16, 2013, submission to EPA.

Additional Request by Cantello, September 3, 2013: EPA would like copies of records of the HTDF surface water elevation for the previous 5 years, if available.

Response:

Eagle has measured surface water elevations in the HTDF relative to a specific elevation datum since July of 2013. A summary of this elevation data is provided as Table 3. In May and June of 2013, Eagle measured the surface water elevation in the HTDF on a relative basis (i.e., elevations were assessed relative to the prior day's measurement). Because these measurements were not related to an elevation datum, they are not reported here. Eagle is not aware of additional water elevation data for the HTDF that has been collected in the preceding 5-year period.

This completes Eagle's response to EPA's Request. Documents relied upon or used by Eagle in preparing its responses to this Request are identified in the Document Index contained in Attachment 1 and can be accessed via the hyperlinks incorporated in that document. As

identified in the Index, Eagle is asserting Business Confidential for some portions of the documentation pursuant to 40 CFR Part 2, Subpart B. If you have any questions regarding this response and enclosed information, please do not hesitate to call.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Kristen Mariuzza
Environmental & Permitting Manager

c: Steve Casey, Michigan Department of Environmental Quality